



# **COLORtube System**

**LED-T40HV COLORtube  
LED-CHV Controller**

## **User Guide**

*Please read these instructions carefully before use*

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## **Introduction**

Congratulations on the purchase of your new CHAUVET lighting effect. We are confident you will enjoy many trouble free hours with this unit. To assist with the care and use of the product we have prepared this short guide.

## **System Overview**

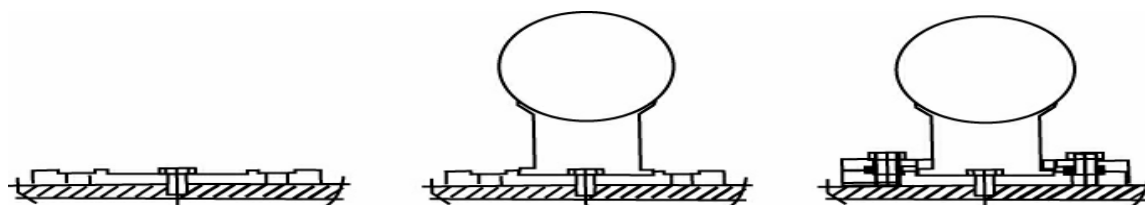
The COLORTube system is a seven color LED lighting effect that produces a wide variety of color changing, chasing and strobing light shows. The output of the red, green and blue LEDs is mixed and diffused to produce pure cyan, magenta, yellow, red, green, blue and white that may be programmed for a broad range of moods, from dynamic displays of color in motion to serene color blends. The system is easy to install and operate. The information contained in this guide will allow the user to have the system running in a very short time.

The main components are the LED-T40HV COLORTube and the LED-CHV controller.

## **LED-T40HV COLORTube**

The COLORTube is a one meter long tube containing 144 high intensity LEDs. Each tube has 4 leads: Signal in and power in on one end and signal out and power out on the other. The first tube must be connected to the mains power via a power cable, LED-PC5HV. The other tubes may be powered via the power out cable limited only by the wattage available from the power outlet. The COLORTubes must be run using the LED-CHV controller. Up to 1000 tubes may be controlled by a single controller however, a signal booster, LED-BOOSTHV, must be utilized every 30 COLORTubes.

## **Mounting Diagram**



1. Mounting Surface

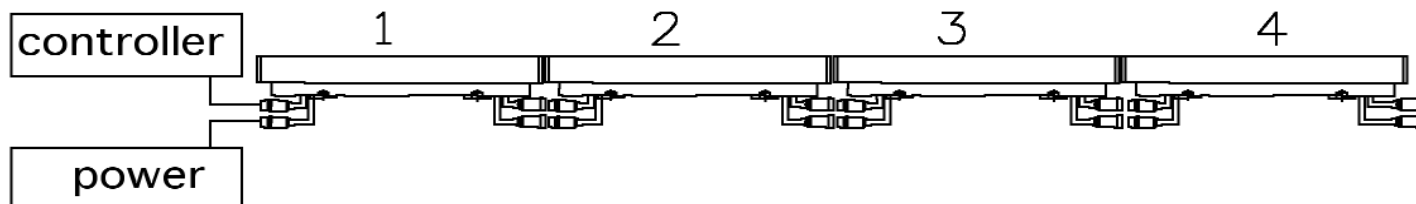
2. Mounting Plate

3. COLORTube

4. Fixing Plate

The COLORTubes are mounted as shown above. The mounting plate (2) is attached to the mounting surface (1). The COLORTube (3) is placed against the mounting plate (2) and secured by the fixing plate (4).

## **System Diagram**



The above diagram indicates how to connect the tubes and the controller. Connect the controller to connector #1. Connector #2 is connected to the power cable, LED-PC5HV, and is plugged into your AC mains supply. Connect connectors #3 & 4 and connectors #5 & 6. Continue to connect in this manner until all COLORTubes are installed. Bear in mind that after every 30 COLORTubes a signal booster, LED-BOOSTHV, must be installed. It is also recommended that a separate power cable be used every 30 tubes.

CHAUVET COLORTubes are rated IP44 for indoor/outdoor use. When installing the system, caution should be taken to avoid windy or rainy locations.

### **Cleaning the COLORTube**

Regular cleaning of the COLORTubes will ensure optimum luminosity. A damp cloth should be used to wipe the tubes. Use water only. Never use chemical or abrasive cleaners.

### **Caution:**

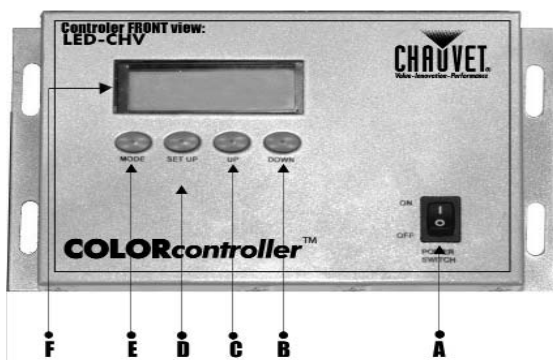
- Make certain that all connectors are securely fastened.
- Never open the housing as this may void the warranty. If you are experiencing any problems, contact CHAUVET.
- Make certain that the power cord is three conductor and that it is properly grounded.
- Disconnect from the mains supply before doing any maintenance.

### **Specifications**

|                    |  |
|--------------------|--|
| Colors:            | Red, Green, Yellow, Blue, Purple, Cyan, White        |
| Source:            | High intensity LEDs - 144 LEDs per 1 meter COLORTube |
| Beam Angle:        | 250 <sup>0</sup>                                     |
| Housing:           | Anodized Aluminum                                    |
| Tube:              | Milky white optically diffused polycarbonate         |
| LED Total Life:    | >100,000 hours                                       |
| Maximum Linkage:   | 1000 1 meter COLORTubes                              |
| Certifications:    | CE certified, IP44 rated                             |
| Voltage:           | 110V, 60 Hz or 230V, 50Hz                            |
| Power Consumption: | Maximum 16.8 watts per meter                         |
| Temperature Range: | 0 <sup>0</sup> C to 45 <sup>0</sup> C                |
| Humidity Range:    | 0-95% non-condensing humidity                        |
| Weight:            | 3.3 lbs  |
| Dimensions:        | 40 x 2.25 x 3 in                                     |

### **LED-CHV Controller**

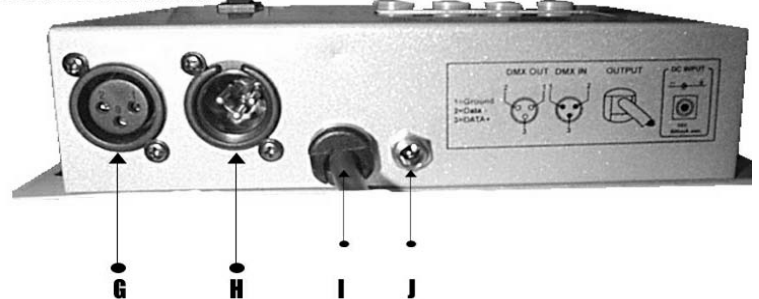
The LED-CHV controller functions either as a stand alone unit or as a 4 channel DMX fixture, controllable by any universal DMX controller. Each controller can drive up to 1,000 linked COLORTubes.



#### Front View

- A. On/Off Power Switch
- B. Down - Decrease Parameter Values
- C. Up - Increase Parameter Values
- D. Set Up - Select Speed, Strobing and/or Color Options
- E. Mode Selector - Select Program Options
- F. LCD Display

#### **Controller REAR view:**



#### Rear View

- G. DMX Out
- H. DMX In
- I. Control Signal Output
- J. Power Input

## **Operation**

This lighting controller has been designed to function on a mains power supply of 120V, 60Hz or 230V, 50Hz and has been supplied with a suitable power adapter.

To connect the controller to the COLORTube, please see the system diagram on page 2. Once the LED-CHV has been connected to the COLORTubes and the power turned on, Press button E to select the desired mode. Then press button D to select the options. Buttons B & C are then used to select the desired parameters (speed, strobe and color where applicable)

| Mode Option (Button E) | Available Colors |
|------------------------|------------------|
|------------------------|------------------|

|              |   |
|--------------|---|
| Static Color | Red, Green, Yellow, Blue, Purple, Cyan, White |
|--------------|---|

| Mode Option (Button E) | Set up Option (Button D)     | Up/Down (Buttons B&C)            |
|------------------------|------------------------------|----------------------------------|
| Color Change           | Run Speed                    | 1-100 (2 min - 5 sec)            |
|                        | Flash Frequency              | 1-100 (slow - Fast) 100 = Static |
| Slow Flow 1            | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Slow Flow 2            | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Roll Chase 1           | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Roll Chase 2           | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Multi-color            | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Fast Flow 1            | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Fast Flow 2            | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| 2 Color Chase          | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
|                        | Color Selection (see note 1) | 0-20                             |
| 2 Color Flow           | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
|                        | Color Selection (see note 1) | 0-20                             |
| Color Fade             | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| Auto Run               | Run Speed                    | 1-100                            |
|                        | Flash Frequency              | 1-100                            |
| System Mode            | COLORTube Address Setting    | Yes / No (see note 2)            |
|                        | Number of Tubes              | 0-1000                           |
|                        | DMX Address                  | 0-508 (see note 3)               |

### Note 1.

Color Combinations Available and value

|    |                |     |                 |
|----|----------------|-----|-----------------|
| 0. | Red & Green    | 10. | Green & White   |
| 1. | Red & Yellow   | 11. | Yellow & Blue   |
| 2. | Red & Blue     | 12. | Yellow & Purple |
| 3. | Red & Purple   | 13. | Yellow & Cyan   |
| 4. | Red & Cyan     | 14. | Yellow & White  |
| 5. | Red & White    | 15. | Blue & Purple   |
| 6. | Green & Yellow | 16. | Blue & Cyan     |
| 7. | Green & Blue   | 17. | Blue & White    |
| 8. | Green & Purple | 18. | Purple & Cyan   |
| 9. | Green & Cyan   | 19. | Purple & White  |
|    |                | 20. | Cyan & White    |

### Note 2.

Before setting the address for the tubes, the sytem must be fully configured and powered. The set up option under sytem mode has 3 choices:

Set Address:

Yes (up button) - This button must be pressed anytime that there is a change in tube configuration or a tube is replace.

No (down button) -

Tube Amount:

Set the number of tubes in the system. This number must be reset any time that there is a change in the connection, either the number of the tubes or a change in the order of the tubes. Once the number of tubes is set, the address is stored in the memory chip in the COLORTube

### Note 3.

The unit can be controlled by CHAUVET's DMX-6, DMX-40, DMX-50, TIGER, ShowXpress or any universal DMX controller. When the DMX address is set to 0, the system will be controlled by the LED-CHV controller. The system will be controlled by the DMX controller when the address is set to a value between 1 to 508. Please consult your DMX controller manual for the proper address to select. The COLORTubes are a 4 channel DMX fixture. **To exit the DMX mode and return control to the LED-CHV, the DMX address must be set to 0.**

## DMX Channel Configuration

### Channel 1

| Value   | Option       | Value   | Option        |
|---------|--------------|---------|---------------|
| 0-12    | Blackout     | 130-142 | Slow Flow 2   |
| 13-25   | Red          | 143-155 | Roll Chase 1  |
| 26-38   | Green        | 156-168 | Roll Chase 2  |
| 39-51   | Yellow       | 169-181 | Multicolor    |
| 52-64   | Blue         | 182-194 | Fast Flow 1   |
| 65-77   | Purple       | 195-207 | Fast Flow 2   |
| 78-90   | Cyan         | 208-220 | 2 Color Chase |
| 91-103  | White        | 221-233 | 2 Color Flow  |
| 104-116 | Color Change | 234-246 | Color Fade    |
| 117-129 | Slow Flow 1  | 247-255 | Auto Run      |

### Channel 2

Speed Setting 0-255 from 1 step / minute to 100 steps / second

### Channel 3

Flash Setting 0-255 from 0 to 20Hz - Off is 255

Channel 4

| Value   | Option         | Value   | Option          |
|---------|----------------|---------|-----------------|
| 0-11    | Red & Green    | 132-143 | Yellow & Blue   |
| 12-23   | Red & Yellow   | 144-155 | Yellow & Purple |
| 24-35   | Red & Blue     | 156-167 | Yellow & Cyan   |
| 36-47   | Red & Purple   | 168-179 | Yellow & White  |
| 48-59   | Red & Cyan     | 180-191 | Blue & Purple   |
| 60-71   | Red & White    | 192-203 | Blue & Cyan     |
| 72-83   | Green & Yellow | 204-215 | Blue & White    |
| 84-95   | Green & Blue   | 216-227 | Purple & Cyan   |
| 96-107  | Green & Purple | 228-239 | Purple & White  |
| 108-119 | Green & Cyan   | 240-255 | Cyan & White    |
| 120-131 | Green & White  |         |                 |

**Specifications**

|                 |  |
|-----------------|--|
| Weight::        | 1.5 lbs                                    |
| Dimensions:     | 8.25 x 5 x 1.75 in                         |
| Data Interface: | Proprietary CHAUVET Data Protocol / DMX512 |
| Power:          | 12 VDC, 500 mA                             |
| Frequency:      | 1-25 Hz                                    |
| Flash Rate:     | 1-20 Hz                                    |